

# ***THE B&O MODELER***

Volume 3, Number 4

JULY/AUGUST 2007



**AN OLD TIME BALTIMORE & OHIO RR BOXCAR OF 1867, PART I  
AWARD WINNING B&O MODELS AT THE 2006 O SCALE NATIONAL  
FROM A CLERESTORY, YOU CAN SEE FOREVER -- CHANGES TO PAIRED WINDOW COACHES**

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Cover Photos – Top, 1867 B&O Boxcar – Bernhard Schroeter photo. Middle, SIRT 29 – Ed Bommer photo. Bottom, B&O Coach 3505 – Greg LaRocca photo.

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## AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY

The Baltimore and Ohio Railroad Historical Society is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the B&O. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the B&O's history. Currently the Society has over 1600 registered members.

Members regularly receive a variety of publications offering news, comments, technical information, and in-depth coverage of the B&O and its related companies. Since 1979, the Society has published a quarterly magazine, *The Sentinel*, dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original B&O source material. Their

purpose is to make otherwise unobtainable data available to the membership at reasonable cost.

Membership in the Society is a vote of support and makes all of the Society's work possible. It provides those interested in the B&O with a legitimate, respected voice in the railroad and historical communities. By working together, B&O fans are able to accomplish much more than by individual efforts. No matter how diverse your interests or how arcane your specialty, others share your fascination with America's most historic railroad. We invite your participation. Several classes of [annual memberships](#) are available. Regular memberships are only \$35.00. If you would like to join, click [here](#) to fill out our [membership application](#), print a copy and mail it to:

**B&ORRHS**

**ATTN: Membership**

**P.O. Box 24068**

**Baltimore, MD 21227-0568**

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## FROM THE EDITOR

### Time Out of Mind

"Hello, my name is Greg, and I am an era mixer. I started out with the firm idea that I would model the B&O in the steam to transition era, but then I bought one Atlas/Roco EMD, an SD35. I was hooked! Modern stuff was neat! Next, I bought one of the then-new Athearn SD40-2's in Chessie System paint,

and before I knew it, I had a model of Amtrak's *Capitol Limited* running over my version of Sand Patch, along with steam locomotives and 40-foot boxcars with roofwalks. Pretty soon I couldn't tell when my model railroad was supposed to be, or what it was supposed to represent. I was suffering from time out of mind! I needed help! That's when I

joined EA (Era Anonymous). They helped me to begin scaling back my equipment using baby steps, first to a cutoff in the mid-sixties, then the early sixties, finally to modeling the B&O in the fifties—now they are helping me to realize a cutoff date of 1956.”

Okay, the above is only a slight exaggeration of my modeling career so far, although not by much. I really did allow my era to balloon to the point that I painted up an Atlas GP-40 for CSX when the first CSX paint scheme was introduced. But then I realized that, instead of telling a coherent story about the B&O, my layout was a jumble of this and that, with only the reporting marks holding it together. I’ve been scaling back for a number of years now, and have the layout so that it is set in the 1950’s, although I still have some anachronisms in regards to early fifties vs. late fifties equipment. My goal is to probably set the cutoff date at 1956, which leaves me with 99<sup>44/100</sup>% of what I want. What about you? Do you have your layout set in a definite year or set of years? Or do you run a variety of equipment, depending on your mood, or just whatever comes out of staging next?

Frankly, I am not sure that there is a right or wrong way to approach the idea of your layout’s era. For me, the idea of restricting the time frame is something that I’ve become more interested in as I’ve gotten older and hopefully, more mature (or senile, perhaps). This has gone hand in hand with restricting the equipment I run, to only that which actually ran over Sand Patch, and not “one of everything” (which is another editorial for another time). But this is a personal choice, one which might not be suitable for

different individuals. For me, what it comes down to is running the widest variety of equipment, from the B&O’s last, golden period before financial difficulties set in, and the C&O took over. Many model what they grew up with, or saw in their youth. If I followed that, I would probably be modeling the late 70’s, when I was in college, and an active railfan, and saw the Chessie System first hand. Perhaps that is why I did mix eras for a while. But now, my aim is to learn as much as possible about one specific time and place on the railroad, and duplicate it in miniature.

I suppose some of you reading this may be thinking that model railroading is supposed to be fun, and not an exercise in restricting one’s self to a specific time frame. Yet, I find the challenge of doing so to be fun. It’s neat looking at a freight train on my layout, and then looking at some of Bill Price’s pictures and seeing that the mix of cars in my train matches that which he photographed. It’s uplifting knowing that my miniature empire is a reflection of a reality that once existed. And it lets me tell my wife with a straight face that I’m not playing with trains; I’m preserving the cultural heritage of the United States.

Like the old ad says, “Try it, you’ll like it.” If you have a mix of equipment, and find that your layout is not quite satisfying, but can’t put your finger on why, pick an era, put what doesn’t fit on a display shelf, and try modeling one, consistent time period. Perhaps you’ll find as much pleasure in modeling a specific era as I do.

Greg LaRocca  
Ellwood City, PA

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## NEWS FROM THE COMPANY STORE

BY GEORGE STANT

### NEW MODEL PRODUCTS

We have some new and exciting models that will be available through our Company Store this summer or fall. The first is a modification kit to convert a Red Caboose boxcar into a B&O style M-26 boxcar. From 1925 to 1931, B&O purchased 14,000 boxcars conforming to the 1923 ARA Proposed Design: 40 feet long, single door covering a six foot wide opening, 50-ton capacity, and 8'-7" inside height. These came in six subclasses, M-26, M-26a through M-26e. Differences included trucks, brakes,

underframes, truck spacing, door hardware, side panels, and rivet patterns.

The last two classes, M-26d (272500-277999, 5500 cars, built 1928-1930) and M-26e (278000-278999, 1000 cars, built 1931) were distinguished by their Duryea Cushion underframe. This underframe consisted of a solid beam fastened to both couplers, moving independently within the center sill. Springs and dampers between the beam and the center sill



provided cushioning from axial shocks and slack action. Besides protecting lading from slack action, it reduced that slack action within the train for better train handling and fewer pulled coupler knuckles. B&O thought this was a wonderful idea and bought many different freight cars with it, including hoppers, covered hoppers, and cabooses. Visually, the Duryea Cushion underframe has couplers that stick out farther than usual, truck centers set back six inches more from each end, deeper cross bearers with different spacing, and brake components mounted below the center sill. There are no major differences between the M-26d and M-26e.

In service, these boxcars lasted into the Chessie era in revenue service, and in company service into the 1990's. They were painted in every B&O boxcar lettering variation between 1928 and 1972. Far more numerous than any other B&O steel boxcar style, the M-26 is definitely a signature B&O boxcar, perhaps even more so than the M-15 and M-53 wagontops.

The model - In the past, Red Caboose offered their popular 1923 ARA Proposed Standard HO scale boxcar kit in appropriate B&O M-26d/e carbody, numbers, and lettering; unfortunately, they did not tool for the Duryea Cushion underframe. To fix this shortcoming, Ted Culotta of Speedwitch Media now provides the proper Duryea underframe parts in resin bundled with undecorated HO scale Red Caboose kit boxcars and accurate custom decals. One version includes decals appropriate for 1928-1955 boxcar lettering, the other with 1955-1960 lettering variations including Timesaver and Sentinel slogans. The B&O RR Historical Society Model Committee assisted with this project, providing B&O drawings, photos, advice, and artwork review.

The kits can be obtained through our Society web site at [www.borhs.org](http://www.borhs.org). Look in the Models folder in the Company Store section to select the kit. Stock # 33113 "Conversion Kit KC102XA B&O M-26d/e Boxcar Early Version 1928-55" retails for \$32.00. Stock # 33114 "Conversion Kit KC102XB B&O M-26d/e Boxcar Late Version 1955-60" retails for \$34.00.

We also have an excellent P-24/25 Flatcar for sale. Since the advent of steel freight cars, B&O standard flat cars tended to be cut down composite gondola cars, or steel flat cars inherited from acquired lines. In 1948, the B&O ordered its first group of longer 53'-6" flat cars from Greenville as underframes to be assembled by B&O shops at Dubois, Pa. These 25

class P-24 flat cars (8000-8024) conformed to the 1941 AAR 70-ton capacity alternate standard design. A repeat order in 1951 for 150 class P-25 flat cars (8100-8249) were also assembled at Dubois from Greenville supplied underframes, also designed to the 1941 AAR alternate standard. They led long lives in B&O service, and persisted in company service roles into the 1980's. These flat cars could be found anywhere on the B&O system in small numbers. It seems B&O frequently utilized other railroads' flat cars for open loads, especially backhauls to Midwestern railroads equipped with large flat car fleets to serve the many farm implement manufacturers there.

These HO kits represent the 1948 70-ton B&O class P-24 and 1951 B&O class P-25. They may also be correct for later B&O flat car classes P-31, P-32 and derivatives, more source material and research is needed to confirm. Unlike the common Life-Like/Walthers model flat car, which is the 1941 AAR standard 50-ton flat car (not the alternate 70-ton standard), the B&O P-24/25 flat cars had a very distinctive low slung look and unique deck details, until now, unrepresented by common commercial HO scale model kits.

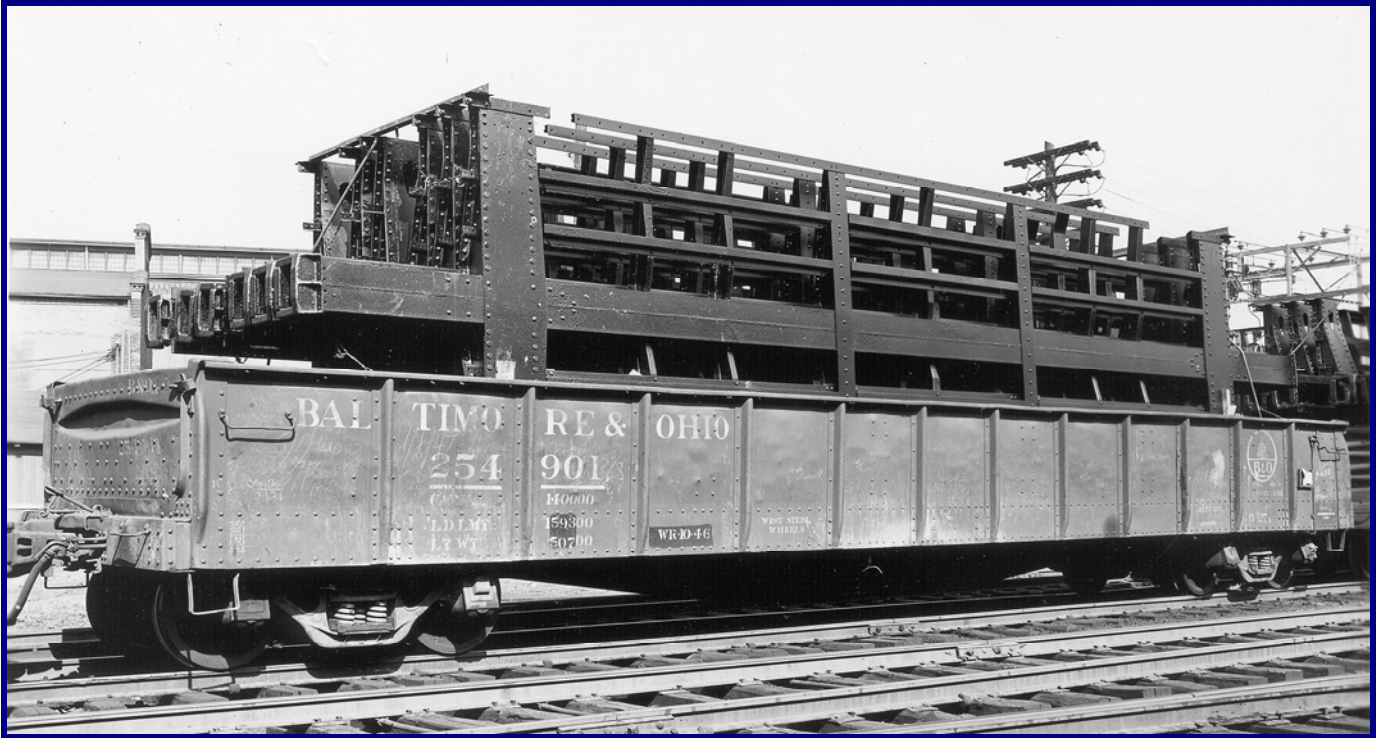
For adventuresome modelers, these kits would be great starting points for later B&O flat cars P-31 and P-32, early piggyback P-31a and P-32a, tandem piggyback P-33 and P-33a, low clearance piggyback cars with wheel pockets P-33b and P-33c, auto-frame carriers P-25b, and early bulkhead flat P-31e

The resin underframe castings are very detailed and in one piece, saving much assembly time. The flat car deck is also one detailed resin casting, representing both wood decking and metal structural elements. Decals are provided and accurate, less weight, trucks and couplers. These kits come two flatcars to a pack and are nicely executed. Installation instructions are limited, but anyone who has experience building resin kits should be able to build these flatcars. The "two car" kits can be ordered through our web site. The kit is stock # 33122 and retails for \$44.95 per two car kit.

This fall, the Society will start offering a new PS-1 Boxcar. We have contracted with Kadee to produce another B&O unique car for exclusive sale by the Baltimore & Ohio Railroad Historical Society. This new car will be the B&O PS-1 Boxcar. In early 1964, B&O leased 218 secondhand 40' boxcars from dealer United States Railway Equipment. These boxcars had

been built originally by Pullman-Standard as model PS-1 boxcars for Ann Arbor in 1956. B&O gave them class and numbers M-67a 468700-468797 (six foot door opening, Youngstown doors, 98 cars) and M-67b 468800-468919 (eight foot door opening, Superior doors, 120 cars). This production run by Kadee will have the 6 foot door openings. We will be doing a 500 car run, with 5 different road numbers (100 per road number). Two of the cars (1968-1980

era) would have ACI labels, three (1964-1967 era) would not and would have the 1964 reweigh and repack dates; no patches. These boxcars will be available for sale through our web site at [www.borhs.org](http://www.borhs.org) and can be located in the same manner as mentioned for the M-26 boxcar above. As is customary with Kadee boxcars, these will be ready to run cars.



O-27a number 254901 on the Reading on June 12, 1947. B&ORRHS Collection courtesy of the Reading Company Technical and Historical Society. The Editor thinks this would be a good model subject, the load looks like underframes. Anyone know more about this load?

**EDITED BY ERIC HANSMANN**

### B.T.S. Models 33' 9" Radial Roof Box Car



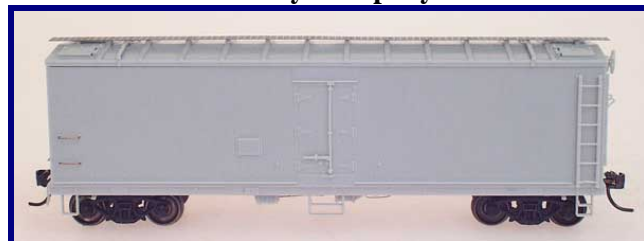
The model features laser-cut wood and cardstock components with hardware in plastic. Less decals, trucks and couplers. A slightly shorter 31' 9" car is also available. To order, contact B.T.S. at <http://www.btsrr.com/>, or visit your local hobby shop.

This debut offering of the Blueline products of BLI is available in the original Chessie paint scheme with two B&O numbers. Sound is included and the model operates on DC. An NMRA DCC socket is installed ready for a decoder of your choice. To order, contact Broadway Limited at <http://www.broadway-limited.com/store/index.cfm>, or visit your local hobby shop.

A summer release of paired window coaches is planned. These cars are based on a C&O prototype, and will be available in single and three car packs. A B&O version will be offered in green and blue with single stripe.



## InterMountain Railway Company FGEX Reefers



There is some concern among the prototype modeling community that InterMountain picked a prototype that represents less than 10% of the prototype fleet. A slightly different version would have offered more possibilities. I'm sure there will be more on this after the models ship in from China.

To order, contact InterMountain Railway Company at <http://www.intermountain-railway.com/>, or visit your local hobby shop.

# B & O B & O

BALTIMORE & OHIO

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BALTIMORE & OHIO

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C&P 140000  
1.01 MT 139000  
L3 9.57 11000  
C&P 140000  
1.01 MT 139000  
L3 9.57 11000

NEW 9-55

B&O 7-55 B&O 7-55  
CU FT 6000 CU FT 6000  
S.W. 4000 S.W. 4000  
WEL. WEL. WEL. WEL. WEL.

N-43A N-43

(B&O 7-55) (B&O 7-55)

631100 631195 631241 631372

631508 631234 631438 631560 631386

631100 631195 631241 631372

631508 631234 631438 631560 631386

631100 631195 631241 631372

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631100 631195 631241 631372

631508 631234 631438 631560 631386

Decals for Baltimore and Ohio Class N-43 PS-2 covered hopper cars, in black or white, are available in HO-scale from Bill Mosteller, P. O. Box 994, Herndon, VA 20172. The decals (# 105) are \$6.39 each, postpaid.

Each set does one car, and includes the spelled out roadname and billboard B&O herald.

The black set will letter cars as delivered painted light gray, the white set will letter cars modeling alkali-resistant black paint. These decals include the road name, road numbers for both sides and ends, capacity data, loading and return legends, and multiple build dates specific to these cars.

Each set provides 12 "canned" road numbers, and the modeler can easily make any road number valid for the cars. Champion Decal Company provided valuable assistance in producing this decal set, which is based on their old HC-409 artwork. To order, contact Great Decals at <http://www.greatdecals.com/>, or visit your local hobby shop.

### **Sunshine Models - B&O M-55c and M-55h box cars in freight and Sentinel Service and B&O O-63 fixed end Bethlehem gondola**

These cars are noted in the latest Sunshine Models newsletter. The box cars are due by the end of October, while the gondola release window is not noted. Get your reservations in early, or cross your fingers that you can get these at an upcoming event that Sunshine attends.

To order, contact Sunshine Models via US Mail at PO Box 4997, Springfield, MO 65808-4997. There is no web contact for Sunshine.

### **O Scale**

#### **Sunset/3<sup>RD</sup> Rail B&O Q-4b 2-8-2**

B&O Q-4b in 2 and 3 rail versions of the B&O Q-4b are set for Winter 2007 release. There will only be 150 of these models done. Road and boiler tube pilots included. To order, contact Sunset/3<sup>RD</sup> Rail at <http://www.3rdrail.com/>, or visit your local hobby shop.

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## **UPDATES AND ERRATA**

### **Steam Era Freight Cars Seminar - Speedwitch Media**

- September 7 & 8, 2007, BWI Airport Four Points Sheraton, 7032 Elm Road, Baltimore MD. For room reservations call 410-8590565. For more information see the Speedwitch Media web site at [http://www.speedwitch.com/stm\\_frt\\_seminar\\_bwi.pdf](http://www.speedwitch.com/stm_frt_seminar_bwi.pdf).

### **Prototype Modelers Seminar – 14th Annual Celebration**

- October 25-28, 2007, To register, contact Sunshine Models at PO Box 4997, Springfield, MO, 65808-4997. The seminar will be at the Holiday Inn, 1801 Naper Blvd., Naperville IL. For room reservations call 630.445.6314, weekdays. There are several B&O related topics on the list of invited speakers and Sunshine Models has announced the release of resin kits for B&O M-55c and h boxcars in Freight and Sentinel schemes and B&O O-63 gondolas.

### **Railroad Prototype Modelers (RPM) Meet East 2008 and 2009**

- RPM Valley Forge, 28-30 March 2008, Desmond Great Valley, Malvern, PA [www.phillynmra.org](http://www.phillynmra.org)
- Pittsburgh Area RPM Meet, 26-29 March 2009, Sheraton Four Points, Greensburg, PA



## MODEL PRODUCT REVIEWS

EDITOR NEEDED

### HO and N Scale

#### Mini Metals B&O L.C.L. Parcel Delivery Trucks

By Edwin C. Kirstatter

When I first saw the Mini Metals Baltimore & Ohio Railroad, Pick-Up & Delivery Service motor truck models I said “Oh Boy, now we have some really nice model trucks to use on our model highways and freight stations.” Since my memory isn’t very good on motor trucks, I didn’t know if this model of an International R-190 B&O RR Delivery Van lettered for Central Transfer was correct. I wondered where they appeared on the B&O System.

Looking through back issues of the B&O Magazine I found in the October 1948 issue a picture of a Jacobs Transfer Co. International R-190 Refrigerated van of Washington, DC. Its paint scheme was the reverse of the model, The B&O Magazine of October 1950 showed five Andrews Transfer Co. trucks at Akron, Ohio that had same paint scheme as this model. In this picture they show three White 3000 tilt cab trucks, one REO and an International R-190.



### New Pick-up and Delivery Service at Akron

All lined up and ready to go with freight from B&O's Howard Street Station in Akron are these five new White trucks. They are operated by the Andrews Transfer Company. On August 1 this company took over our pick-up and delivery service from

the Railway Express Agency in the Rubber City. The trucks, painted bright orange and blue, make a snappy appearance. They are doing a good job, too, according to Division Freight Agent J. W. Babneu



B&O Magazine, October 1950

If a modeler would want to do a little kit bashing he could take the van body from this R-190 and put it on one of Mini Metals White 3000 trucks after removing its box, dump or tanker body. Or use one of their tractors instead. To get the matching paint for the cab

and correct lettering is going to be the hardest part. You may have to resort to computer graphics and print your own decals. If you want to do a Reefer for Jacobs Transfer Co. you will have to do a total repaint and re-lettering and add a refrigeration unit on



front of box made by A-Line. Don't forget to paint

the truck fenders black.



## NEW REFRIGERATOR TRUCK

Here is one of two brand new refrigerator trucks that went into service in Washington in August. Each truck is equipped with an automatic refrigerator unit powered by a two-cylinder gasoline engine. The trucks provide complete protection for less-than-carload shipments of frozen foods, meats, dairy products, etc. Our Washington freight salesmen now can tell shippers, "Only B&O has this service." Congratulations to the Jacobs Transfer Company, our pick-up and delivery contract draymen, who are responsible

BALTIMORE & OHIO MAGAZINE

B&O Magazine, October 1948 (International R-190 refrigerated van)

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## AWARD WINNING B&O MODELS AT THE 2006 O SCALE NATIONAL CONVENTION

BY: ED BOMMER AND JOE FOEHRKOLB  
PHOTOS BY AUTHORS UNLESS OTHERWISE SPECIFIED.



SIRT 29 began as a Locomotive Workshop 'economy 0-6-0' kit. In the end, only the mechanism, frame, cab and cylinders - all extensively modified - were used. Yes, camelback engineers most often did sit on the window sill arm rest like that to run the engine, rather than stay in the cab seat beside the hot boiler.

### 2006 O Scale Convention

From June 19-23, the 2006 National O Scale Convention was held at Parsippany, New Jersey. It was hosted by the New York Society of Model Engineers which was founded 80 years earlier. There were many excellent models entered in this convention's model contest. Several B&O entries won awards including these four, reviewed here for *The B&O Modeler*.

#### Staten Island Rapid Transit Class D, Number 29

The First Place award for Steam Locomotives was won by a brass model of SIRT 29, a Class D Wootten-firebox 0-6-0. The prototype was one of a pair built by the ALCO Rhode Island Works in February, 1908. They had 19" x 28" cylinders, 52"

drivers and developed 29,700 lbs. tractive-effort with a maximum steam pressure of 180 psi. Although ALCO products, they were 'blueprint jobs,' essentially copies of the 1906 Baldwin-built B&O D-23 class Wootten-firebox engines also used in Staten Island service.

The boiler was made from a brass kitchen sink drain pipe and the tender is completely scratch-built. A number of commercial detail parts were also used on the model, which is finished using a 50/50 mix of Floquil Engine Black and Grimy Black paint, with Champion decals for lettering. Light weathering was done with Floquil washes and chalks.





SIRT 29 prepares to move B&O's "Genesee River," as it makes up a west-bound train on the Baltimore & New York Railway, now under construction.

This model features an on-board sound system that is synchronized with the drivers, producing four 'chuffs' per revolution. It is also equipped with constant/directional headlights and is capable of hauling up to fourteen O scale freight cars on level track at a scale 35 mph. This was about the same maximum speed allowed for the prototype.

Photographs of SIRT 30, the sister locomotive, were the primary source for building this model. At the time it was constructed, a photo of camera-shy SIRT 29 had not yet been found and I had no plan or diagram for it. However, upon finding a diagram for the SIRT Class D engines after joining the B&O RR Historical Society, the model was found to be within 90% or better of the prototype's dimensions.

### Prototype Photographs

Number 29 was the last active steam locomotive of the SIRT when it was retired in August 1945. There

is an account of SIRT 29's last run you may like to read: <http://myrecollection.com/bommere/old29.html>.

### B&O Class E-27ca, Number 2714, built by Joe Foehrkolb

The award for Second Place Steam Locomotive was taken by a model of B&O 2714, an E-27 class 2-8-0. The prototype for this model was built by the ALCO Richmond Works in January 1910. The E-27 class was the most numerous of all B&O locomotives. Classed as E-27ca, this indicated it was equipped with piston cylinder valves, Walschaert valve gear, a 25 unit super-heater and 24" x 30" cylinders. This engine, according to B&O Summary of Equipment No. 44 of January 1, 1945 also had 62" diameter drivers and developed 50,900 lbs. tractive-effort with a maximum steam pressure of 215psi. B&O 2714 was sold for scrap in September, 1952.





This model has some true B&O history in it. The sand-cast frame, cylinders and driver castings were purchased from Ken Henry, the B&O Public Relations Representative who was a model builder for the B&O and maintained the railroad's traveling O scale exhibition layout. The sand dome and boiler tube pilot were cast by Central Locomotive Works from patterns also made by Ken Henry.



About ninety individual parts went into making the smoke box front. The boiler was machined on a lathe from naval bearing bronze and fitted with rivet embossed wrappers for the smoke box and fire box sides.





Both the tender and cab are scratch built in brass. Other details came from a variety of sources.

Many procedures used in building this model were adapted from a 1940's article by Mel Thornburgh. Several of his models are at the B&O Museum. Paint and lettering on the model represents a 1930's appearance.

#### **B&O Class S-22 Observation Car, "Genesee River"**

The First Place award for Passenger equipment at the 2005 O Scale National Convention was won by a model of the streamlined B&O observation car, "Genesee River." Originally built in 1939 by Pullman-Standard, it was one of a set of three cars used for New York Central's Southwestern Limited, between New York City and St. Louis.

Accommodations included two bedrooms, one compartment, one drawing room, a buffet area and an observation lounge. By the mid-to-late 1940's the three cars, named Genesee River, Maumee River and Wabash River, were used in sections of the New York to Chicago '20<sup>th</sup> Century Limited.'

In 1956, the three cars were returned to Pullman and upon resale, were painted for B&O National Limited service between Washington DC and St. Louis, keeping their original names. These cars remained until the end of full National Limited service in August, 1966. Genesee River is the sole existing car of the original set, as the other two were lost in wrecks.



This was the beginning. Originally made from a 1948 Kasiner O scale smooth-side observation kit, the car was purchased on e-Bay for \$10.00. Although looking rough, this extruded and punched aluminum shell is a fairly accurate rendering of the 1939 observation cars built for the New York Central. The trucks have cast bronze side frames made by Lobaugh, another O Scale producer of that era.



After some time in the shop, a freshly rebuilt O scale Genesee River is almost ready for paint. Changes included removal of the skirts between the trucks, making the buffet kitchen window smaller, cutting in two small windows for the compartment's upper berth and correcting locations of details the first builder had put on.

A new vestibule end with an inside vestibule wall, a new tail end door and rear buffer were also made, to replace parts missing on the original model. Photos of the prototype Genesee River and sister cars were

used to for detailing the model's underbody, exterior and interior furnishings. Venetian blinds in the car were computer drawn and printed on overhead projection transparency stock.



This model of Genesee River also features a detailed interior. Keil Line produces a number of former Kasiner detail parts as well as other excellent detail items for O scale passenger cars. Scale Coat paint and Microscale decals were used in finishing this model.



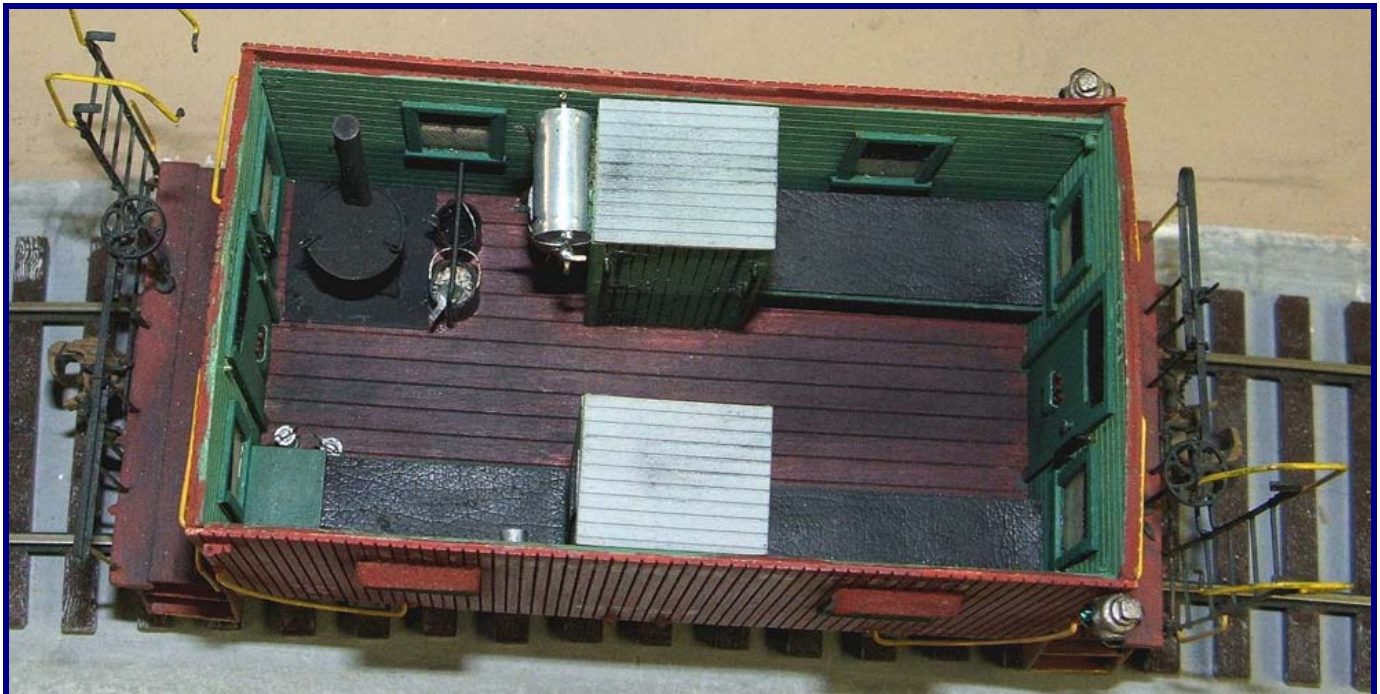
### **B&O Class K-1 Caboose, C-721**

The award for First Place Caboose went to a model of B&O C-721, a Class K-1 four wheel wooden transfer caboose. These cabooses were built by the B&O between 1890 and 1910. Several K-1 cabooses including C-721 were assigned to the New York Terminal/SIRT service from 1890 until 1954. During

rebUILds, the cabooses lost their cupolas by the 1940's. Several cars received replacement steel under-frames as well. All K-1's in New York Terminal service were retired by 1954 and burned for their scrap at Arlington Yard, being replaced by larger I-1 class 8 wheel cabooses.



This model of C-721 was built with Northeastern wood, journal pedestal castings from Keil Line, and doors and windows from Grandt Line. The window glazing is scribed to represent the 'wire glass' (an early kind of safety glass) that was used on the prototypes in New York Terminal/SIRT service.



Interior details include a stove, sink, water tank, leather cushions for the bunks and fuses in racks on the doors. The detailed underbody includes full air brake piping and rigging. Lead weights are encased in the lockers. Floquil paints, Champion alphabet decals and chalk weathering finished the car.

**Seven award-winning B&O models were shown at the 2006 O Scale National Convention:**

SIRT 29, Class D, 0-6-0, Wootten firebox: First Place Steam Locomotive, built by Ed Bommer.

B&O 2714, Class E-27, 2-8-0: Second Place Steam Locomotives, built by Joe Foehrkolb.

B&O "Genesee River," Class S-22, sleeper-observation: First Place Passenger, built by Ed Bommer.

B&O 627, Class B-8aa, baggage car: Second Place Passenger, built by Ed Bommer.\*

B&O 287015, Class M-24a, cement service boxcar: Third Place Freight Car, built by Ed Bommer.\*

B&O C-721, Class K-1, four wheel transfer caboose: First Place Caboose, built by Ed Bommer.

B&O SF-43, Snow flanger: Second Place Maintenance of Way, built by Ed Bommer.\*

\* These contest models have been previously shown in *The B&O Modeler*:

Vol. 1 No. 3: B&O Baggage car 627.

Vol. 2 No. 2: Snow flanger SF-43 and Cement service box car B&O 287015.

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# AN OLD TIME BALTIMORE & OHIO RR BOXCAR OF 1867, PART I

BY BERNHARD SCHROETER, SPECIAL REVISION AND EDITING BY DARRELL SMITH

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



## Introduction

My name is Bernhard Schroeter, I live in Dresden, Germany, and I am 63 years old. I was trained as a steam engine repairman and worked for many years as railroad foreman in a steam engine yard (1960 to 66). Loco repairman was the right profession in my younger years but I could not work as an engineer because I have color blindness. A few years later I studied in Mathematics and left my railroad career after eight years.

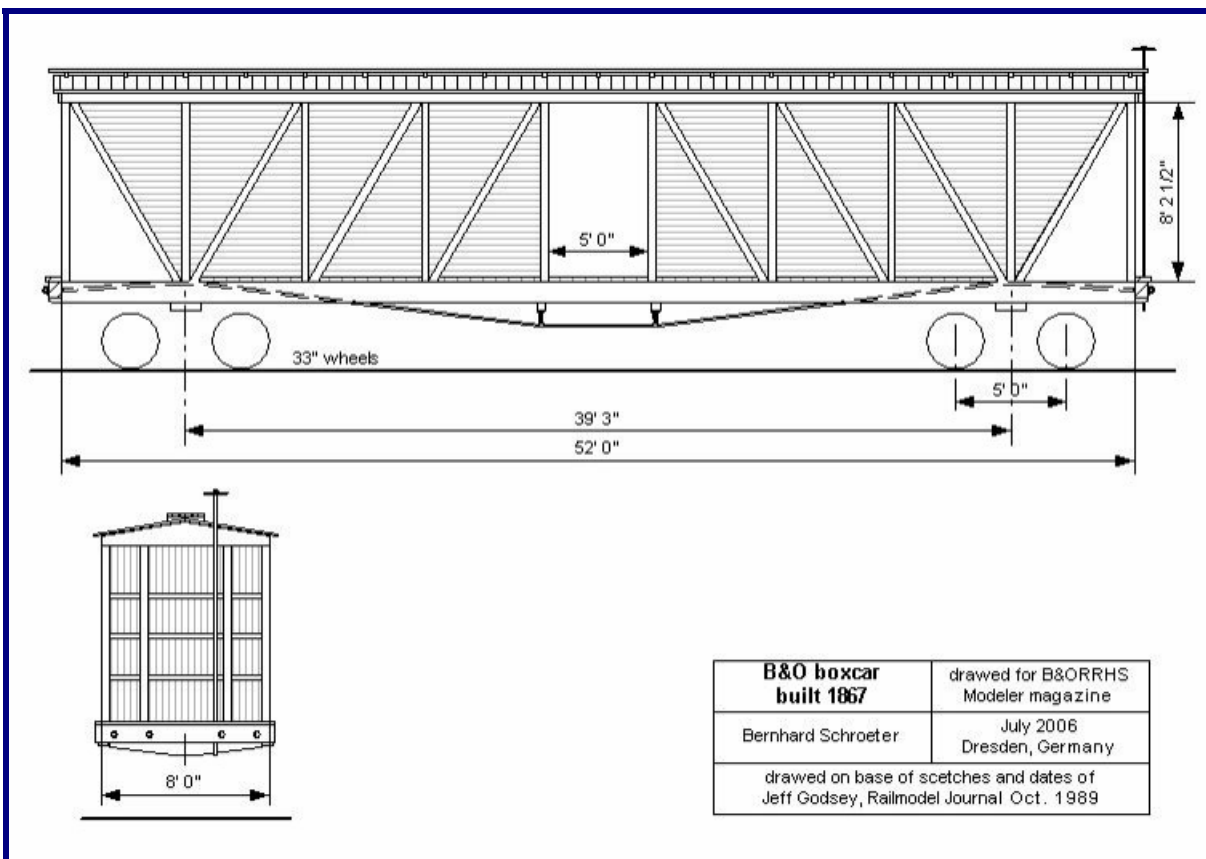
I have been interested in railroads since childhood and am fascinated with steam engines since the earliest time. During my time of study I found *Model Railroader* magazine in the library of my university and for the first time saw pictures of American railroads with all the extraordinary engines like Challengers, Big Boys, Shays, Climaxes and all the other big engines of American railroads – a fascinating and unknown world was opened to me! Since then I have collected all the models and documents which I could get from my new friends in the U.S.A. (I began with a reply to a private advertisement selling TT-models. The former GDR (East Germany) had the only TT-scale model manufacturer at that time.) Years later, shortly after Germany's reunification, I organized the first U.S.

model railroad show in East Germany together with a model railroad club here in Dresden. Ninety percent of exhibition items came from my collection. The event was a very well attended. Never before could we show our US models to the public. Germany's unification has opened new horizons also for US-modelers.

Recently I have focused on the 1900 era for my model railroading, but the time boundary isn't rigid. I love all steam engines like before, but I prefer to get only models of locos that predate 1920, remembering that the Virginian class AE with a 2-10-10-2 wheel arrangement was built in 1917 already. This a very fascinating engine to me with the largest steam cylinders ever built, with an inner diameter of 48 inches! I also love the smaller engines of that time: the Americans, Moguls, Consolidations as well as all the extraordinary geared engines. But the largest difference in my model railroading is this: I no longer buy commercially produced plastic models, but am now building my own models of the wood cars fitting this 1900 time period. Here also, the times can vary and the only restriction is that the original cars must be built from wood.



## History of model building and a few dates to the B&O car:



*Railmodel Journal* magazine published a series beginning in July 1988 documenting older 50' boxcars. In November 1989 was published an appendix to these cars written by Jeff Godsey, including a sketch and a few data of a boxcar even longer than 50' and with ends looking like a hopper car, that was built in 1867. It was used for transport of flour in barrels and I was very surprised that such a long car would be in use by U.S. railroads in that early time! In a time that cars normally had a length of 30' and often shorter! Jeff Godsey had found this car and basic information in *The Railroad and Engineering Journal* November 1892 issue. Data given by Jeff Godsey are: Load capacity 72,000 lbs., 52' long over end sills, 7' 4 1/4" wide inside and 8 foot wide outside, 8' 4" inside height. The door clearance was 8' 2 1/2" by 5' and trucks are 39' 3" apart between centers. Jeff Godsey's sketch shows a car with inside sheathing only and the unusual diagonal ends, a very uncommon feature of that time just as the whole car was uncommon in that time. But in order to carry barrels the diagonal ends have a real function for such a rare feature. I thought that it would be a challenge to model such a rare car and

then to run it in an old time model train between ordinary 30 foot car models! I started building a model without enough planning and had to correct and re-correct ... until it was obvious the deficiencies were too great for what I wanted and so I aborted my first attempt. In the article's lead photograph, you see the finished "first model" – as a very old track-side structure on a friend's layout. (Sorry, but he was lucky to get my scrapped "model".) After the mistakes of first attempt I started over with a few scale drawings (shown above) and with the firm intention to build a better model than before.

### Further Research

Before building the first model I had tried to get more information, but until recently I could find no more data on this car. All I could do was to find data of railroad practice from the post-Civil War era. I still had many questions: how was the frame constructed, common rules for steps and ladders, the use of truss rods, how the mechanical brake worked in that time, at one or at both trucks? I also had questions about the sketches by Jeff Godsey. Was the car inside

sheathed only? Does the framework on the sketch represent that of the prototype?

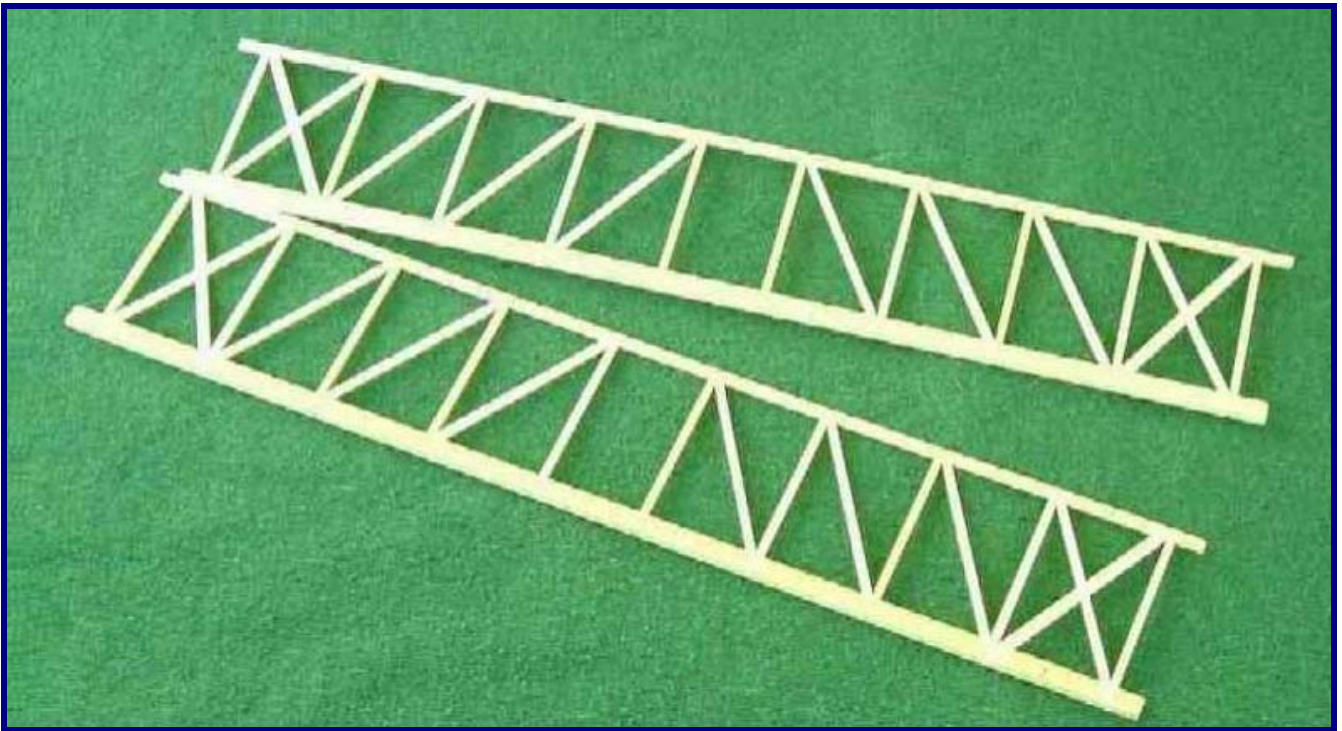
First of all I studied many old pictures of railroad cars before 1900 in a few magazines and books. A big help is the book *The American Railroad Freight Car – From the Wood Car Era to the Coming of Steel* by John H. White that gives a thousand hints and ideas to build such a model of a long gone era. I finally realized that without all the answers I must make many compromises and my model will be only an approximation to the original car, but I hope to build a good model that represents what the prototype might have been like. I will write at all points of description where I did not have a solid base of fact and where I must find a solution for my modeling project. And I hope all you as the B&O specialists can give me a validation to my solutions.

### Model Building– part 1:

One thing changed at the start– I'm building two models instead of one, as a friend asked for a duplicate model and so I must build two now. I will write about differences of the two models where it is necessary.

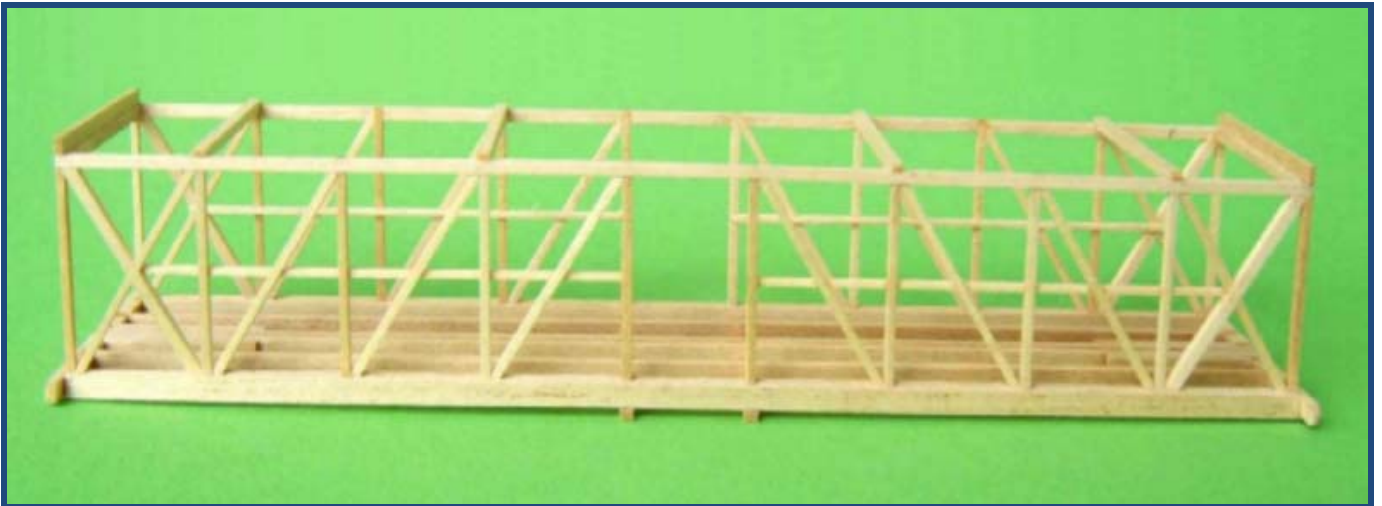


The only parts of the first attempt I can use again are the pictured brakes with wood beams and the aged trucks. I think you can see that the trucks have wooden truck bolsters stiffened by truss rods. I am sure that probably nobody will see these details but it is a typical construction of trucks of the 1860s and 70s before steel bolsters replaced the wood one. I was lucky to find a pair of old sprung trucks with metal side frames and equipped with a shorter wheelbase that was suitable for this era. The only problem with these trucks is that the wood bolsters are higher than steel bolsters, so the body bolsters must be modified for one of the models, because I own only one set of these trucks. The second car will get Kadee arch bar trucks, where the wheel base is longer and is not right for the built date. Could these cars have served long enough so that the trucks were replaced in later years to a more modern type?



Sorry for the poor quality of this picture. This is made with a lower resolution on a bad background and the model has now progressed so I can't make a new one. Like the first time, I modeled these sidewall girders first before starting with the frame. I think it is easier to build these side girders on an flat workbench in order to mount them square to the

frame beams. These side girders were the only parts I could build accurately using the original sketches. For all other modeling details I studied again and again the old methods of freight car construction in order to get the best estimation of how this car was built. Once again, John H. White's book is an excellent aid for me to realize my modeling ideas..







The side girders are connected at the ends with the end sills and end top plates to form a box, then all intermediate sills are added. In order to give more stability for the frame sills I next added the two crossbars for the queen posts below the door beams. Additional framing at the ends of the center sills is preparation for coupler mounting at a later time. Top bracing across the long plates are only temporary glued strips until the car body is equipped with its full bracing. In most cases I build with longer wood strips than will be needed for the finished model - in this detail the side and end sills. This method enables me to sand the ends after the completion of such crossovers on a completely accurate length without breaks and edges. The end view shows this general construction principle well. I try to build all joints of wood strips with notches so that parts have mechanical stability in addition to gluing. The next steps will demonstrate the absolute necessary for this method. Here is also the first deviation from the plan.

All pictures or drawings I have seen of other old time cars show a more solid construction of side girders. For this reason I added additional beams on the inside at half height of side girders.



Next I finished the frame construction of the car ends. Look at the inner diagonal braces where end siding planks will be mounted inside. There I made a few changes from the original drawing. The original drawing shows three horizontal braces, but it's not sketched as sheathing, inside or outside. But I'm sure that the car had end sheathing and that it must be inside the framing also. I changed the horizontal braces to diagonal vertical braces so that I could add an inner sheathing with horizontal planks. There were a few poorly documented things for which I must find a solution, which must be correct in sense of both mechanical and period appropriate construction. I added two vertical posts as well as diagonal braces at the ends for a higher stability. All pictures of that era show a stiffer frame construction than was drawn in the original sketches. I think that these parts are good additions and these ends could be accepted by the former railroad car builders. This framing must be done well because this frame construction will be easily visible on the finished cars.



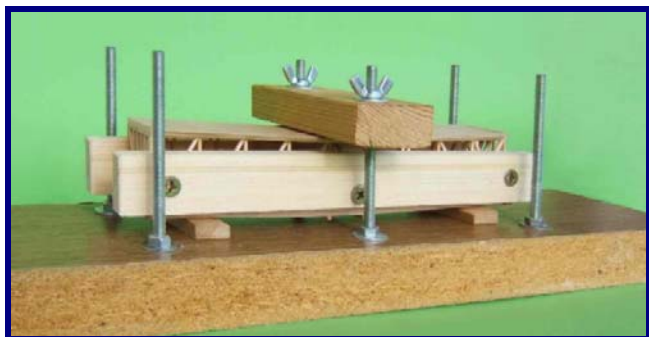
Here are two pictures of my model building techniques. In the first, end strips are glued to the frame. In many cases I use white glue, everywhere larger gluing areas exist. But then I must clamp parts until glue is dried - like here bolted together with two wood pressure strips for a uniform clamping. I glue smaller connections only with ACC, but I prefer to use white glue where I can.

In the second picture two smaller wood strips are glued as end plates using my larger press jig. These wood strips are then the backers for end bolsters. Also in this case I use white glue.



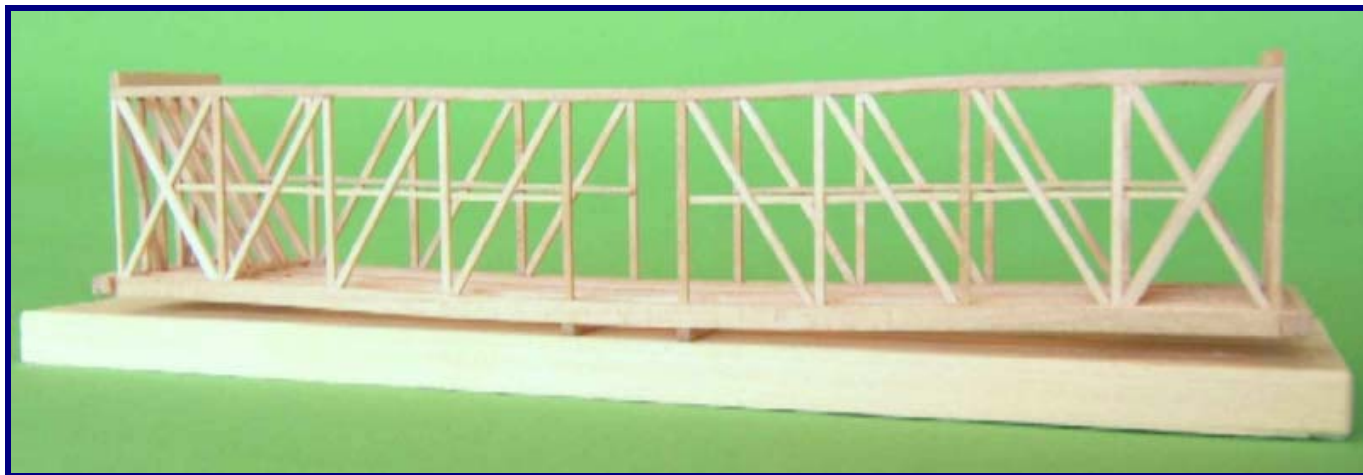
### Aging such old models?

A friend commented, "Your models are so carefully made, why must they look like old and used models every time?" This model of a car built in 1867, should it look fresh from the car builder shop when I will use it for my 1900 modeling era? I have a method to fix this. All my models have some aging and weathering - and then comes this model fresh from the shop with fresh paint and lettering yet? No, not with such a very old car! I model in the 1900 era and by this time this car was a very old piece of rolling stock! At this point I begin with the first steps giving these models their aged look.



I held the whole frame in a water bath until the wood doesn't soak in more water, and then I pressed the frame with my big press jig.

The frame is set on two wood blocks exactly under the truck bolsters. I then made a thin board that has four strips glued on to match the top strips of the



... and it has been "aged" for 15 or 20 years and only two of the wood joints needed re-gluing, this time with ACC. The model now sags 1/8 inch in the center, and best of all the ends have remained nearly horizontal like before bending. I think this effect is very realistic. Old wood cars have had exactly this

frame in order to hold it in a fixed straight position. I braced the sides by heavy wood blocks clamped inside and outside so all of pressing power must be transmitted from the top along the vertical posts down to heavy frame sills. A clamp block on the top center then applies pressure. And what is the result?



Unwrapping one of models from the jig after two days of drying ...

form after 10 or 20 years of use in railroad service. Old pictures of wood cars are the proof. I think I should make a short annotation about this method at this point. All the magazines and model builder books I have seen write that all wood strips should be pre-bent before you start assembly when building



such an aged model. I think this works and it must be done in this way if you would use solid wood floor and roof. But my models have a piece-built frame

construction like this one, and I like this soaking / clamping method in order to get even better results. Look the next picture!



Ok, I did make this shot at a later time, as a few more parts were added. However do you see the difference from using preformed wood strips? Look at the posts and braces; how they compressed the upper plate strip while in the pressing process. And look at the middle horizontal wood strip that I added as a stiffener for the posts. It has taken a bend at each joint with posts and braces. It was a straight wood strip before!

I was pleasantly surprised and I think that I got a very good result in order to represent a really old car, better then I would have had I preformed all the strips. All the posts are in their correct position after the aging process as well.



Here you can see the next additions. All the vertical posts have tension rods that hold the lower and upper sills together with the posts. This is the theory, but in reality (and I try to show this with my model) with a natural material like wood, these steel rods will not hold the cars exactly in their new form over time once they leave the car builder shop. The same principle was used in wood bridge construction, i.e.

Howe truss bridges. The upper trusses were stabilized in position by the diagonal braces and the lower trusses hang on one or more steel rods on many points. Also White's book documents these tension rods used in very old cars, and I think this construction was in use from very early days of railroads. The basic sketches I am working from are too raw to show such fine details, so that I must think like a "railcar constructor" to use the appropriate details.

You see here also the very shallow body bolsters as result of using the very high wooden truck bolster.

If you remember, you can see in previous pictures that two cross bars were added for mounting queen posts at a later time. Here I have removed them again because I found them not correctly positioned. They will get their corrected mounting at a later time again when I will add the "queenposts" and truss rods.



This picture shows the second model prepared for use with Kadee arch bar trucks. You can see the different shape of body bolster with real working side bearings, a detail that all the wood frame cars of that time had – truss rods on both sides of the body bolsters in order to give the frame more strength across the car. The missing end bolts and nuts at the side sills will be added as nut/bolt/washer-parts in the last details the models. The holes in the brass plates are drilled already as you see. With the side bearings I get an excellent three point equalizing to my models. The model bears on the truck bolster of one truck at the side bearings outside of center. On the other truck, the bearings have a reduced height, so the

car bears on the center pivot only. In this way all my models have no swing and wobble and they run over uneven track without any problems.

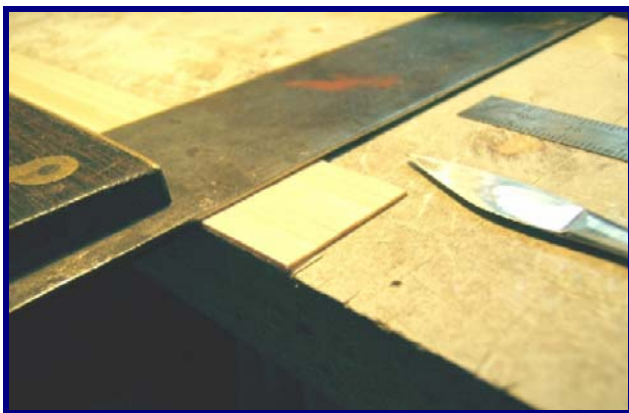


The model now has the floor planking and also side and end sheathing installed. In each case I use scribed wood sheets, but for the sidewalls I reduced the scribing depth with fine sandpaper. I think it looks better than the original material that is available from an American model building supplier. In the picture you see the horizontal scribing of the end siding, something I mentioned before. You also see one of two lead weights inside on the floor. These are needed to give the model the right weight for NMRA specifications. The side planking is glued in small sections inside the framework that you can see also through the door opening. Each piece is half the height of the sidewall and has the length of center to center of the posts. In this way I could make the planking follow the contour of the framing that I got by the aging process with all the deformations. Must I tell you that a few planks must get some damage by rough loading after the cars were in service? I must say though that such damages are in most cases from the inside only and so I must "destroy" a few "planks" before the roof is added. In that time loading and unloading of cars was a heavy manpowered labor and seldom were cranes in use so that the damages could not come from outside by swinging loads and crane hooks.





Its time to add the roof. To give the model roof a really solid base I glued a thin plywood sheet inside the upper plate before I added all the roof parts. Next I glued fascias on the end plates and glued the ridge and intermediate joists on the plywood sheet. After fastening the parts I sanded the profile of this peaked roof, like that shown in the drawings. Around 1867, cars with rounded roofs were a regular part of US-railroads. Peaked roofs were more common in late 70's, early 80's, and later. But here I modeled after the original sketches, so that that the other impression is a car with a later rebuild after the original car.



Here is a series of views of my method of building the roof. Ten to twelve wood strips are butted tightly together on an adhesive tape and now I work with this as a bundle until installed. First I'm cutting bundles to length. Visible are also small differences

in thickness of the wood strips, here a small quality problem that will give the roof an old and used look after finishing. When I build sidewalls with these strips then I must sand them all after gluing for a smooth surface. Here it is desired to show each strip made from a different wood piece as if rain, heat and humidity have aged them individually.



It is faster to glue the planks in bundles on the roof joists. But before the glue dries I give a few planks lesser or more heavy damage to appear like a very old roof after many years in use without repairs. This is typical damage that comes from rain and humidity, when all the planks are swelled a bit and under stress and thereby one or two planks will move upright at critical points. I have also found such details in

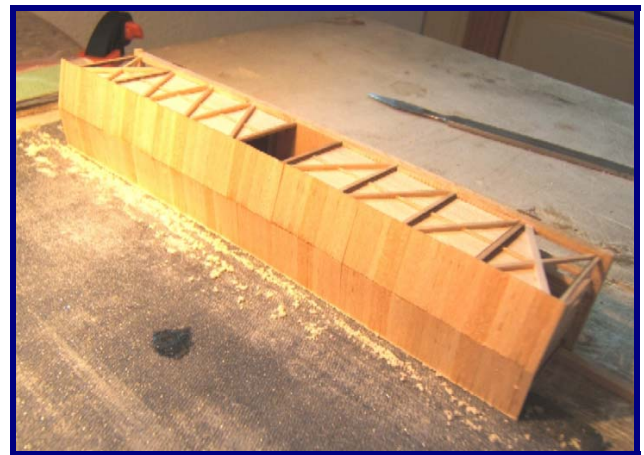
White's book that is a great help for me to do this modeling job. Here a short quote from this book, page 221:

“A survey conducted by the New York & Harlem in 1878 found that the interchange cars passing over its line had roofs in varying degrees of bad order. The data was gathered railroad by railroad – the worst recorded 65 percent with leaking roofs and even the best was 7.4 percent. Fourteen years later J. C. Baker ... found the situation little improved ... He found that fully 25 percent of the cars had leaking roofs.”

I think my models could be samples of the worst group of cars and I hope that the B&O Historical Society's members don't stone me for my models being in such bad condition.



Because I glued the boards from both ends toward the center I must fill the center gap with a few single boards which I must sand for an exact width and a closing look. Small differences in width of the boards aren't seen after closing the gap.



Once installed I sand the ends of the roof boards to the right length...



... and I think that I have built a nice looking car body with a few appropriately aged details.

At this point the first part of my model building story is done. The second and final part describe all the super detailing, adding the roofwalk, ladders, doors, brake, truss rods, “iron” hardware and finishing - painting and lettering.



## FROM A CLERESTORY, YOU CAN SEE FOREVER -- CHANGES TO PAIRED WINDOW COACHES

BY GREG LARocca

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



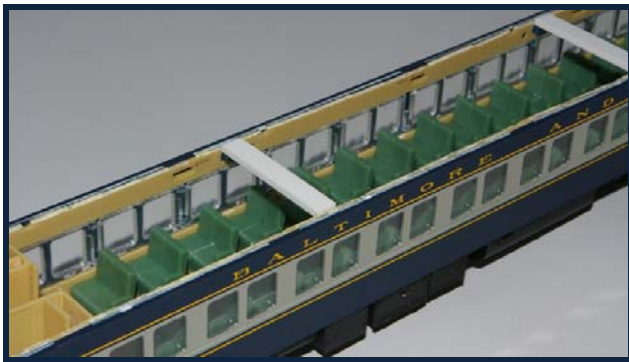
B&O Class A-20a Coach 3505 in Pittsburgh PA on February 13, 1965. Bob Rathke Photograph, <http://www.rr-fallenflags.org>.

Back in September of '06, Bruce Elliot emailed the B&O Yahoo group that it is possible to switch roofs between the Walthers standard paired window coach and their modernized paired window coach, resulting in two B&O coach classes that differ from the stock Walthers cars. I immediately ordered one each of the two style coaches, and made the roof switch. However, there are two drawbacks to doing this. First, for every coach with modernized windows and a clerestory roof you want, you will also wind up with a coach with standard windows and a round roof. Second is that B&O apparently only had one coach with standard windows and a round roof. Since coaches with modernized windows and clerestory roofs, such as the Class A-20a shown

above, were quite common on the B&O, the real problem is, how do you have multiples of this type coach without bankrupting your budget? Now, like many of you, I have for years been using Bachmann-Spectrum PRR P70 style coaches as B&O A-18/19/20 class cars. It occurred to me that the roof from one of these cars might be made to fit onto the Walthers modernized coach. With scale rule in hand, I made some critical measurements, and sure enough, the roof was both long and wide enough to work. In addition, it has the "wide" clerestory, just like the B&O used. As a bonus, the roof from the Spectrum PB70 style combine will work as well (and is what I ultimately used). Here is what I had to do to fit the Spectrum roof onto the Walthers car.



The first step is to remove the Walthers round roof from the modernized coach. I followed the directions that Walthers provided, and used a #17 blade inserted between the roof and the car side at the indicated positions. I have found that angling the blade ever so slightly upwards is helpful. After removing the roof, I used a pair of Maxon rail nippers to remove the ridge that runs along the top of the car body, as well as the angled section of the interior. Figure 2 shows a modified car on the left and an unmodified car on the right. Note that the car ends have a raised area that is not removed.



I then glued 0.060 x 0.188" styrene strips, cut to 1.145" length, spanning the car sides. These are super-glued onto the tabs that hold the interior walls in place. They will stick up slightly from the top of the modified side but that's okay, as we are going to use the "shelf" thus formed by these span pieces as a glue point to attach the new roof to the car.

Next, the roof has to be modified. Begin by using a Dremel Moto-Tool with a fine toothed rotary saw blade to remove the clear "window" from below the roofline. I tried to get as close to the roof as possible, but was careful not to cut into the roof. I then used a bastard file to remove the remaining material, and angle the roof bottom upwards toward the center of the roof. Frequently test the fit of the new roof onto the car as you file. Once you are satisfied with the fit, glue 2 x 4' scale styrene strip along the bottom of the roof, even with the outside edge. The strip should be long enough to span the car side from end to end (see Figure 6). The final step is to remove the PRR style ventilators, fill any gaps or blemishes with Squadron White Putty, and when dry, sand with progressively finer grades of wet/dry paper. Also sand off the rivets along the edge of the roof at this time. When you are through sanding, put some Crest Toothpaste on your finger, and gently buff all sanded areas. Crest Toothpaste!? Yes, Crest Toothpaste. I



was told by my orthodontist many years ago that Crest is the most abrasive of toothpastes on the market, and that long-term use can wear down one's enamel. Being constantly on the lookout for new modeling tools, I immediately bought a tube and discovered that it makes a great finishing paste when sanding down models. At any rate, when you are done buffing the roof, wash the it thoroughly with soap and water, rinse, and allow to air dry.



The roof is detailed with drip strips, made from 1 x 2' scale styrene, three scale feet long, and cast metal Gold Vents from Bethlehem Car Works. I determined the positions of the vents by taking measurements from a Walther's standard paired window coach's clerestory. Note that the seats in the modernized coach face the opposite way from those of the standard coach; the Gold Vents are not spaced evenly from the ends, so that they will be opposite of their arrangement on the standard coach (assuming that they stayed the same in relation to the underbody equipment).



The roof is painted with Polly Scale Steam Power Black. Once dry, I glued the roof on using four drops of five-minute epoxy, a small drop placed in the shelf formed by each of the spanner pieces. Be sparing of the glue here, since you don't want any to leak out, and you want the roof to stay put, but be easy to pry up in the event you ever need access to the interior. Epoxy is a good choice for this, since it tends to

remain somewhat flexible. Goo might be a suitable substitute. The final steps are to number the cars (I chose numbers for class A-20a cars from the TLC Diagram Book, since those with sealed windows did not have any closed off vestibules or windows), add the grabs, and weather your car using your favorite methods.



The finished model is shown in front of a stock Walther's standard window clerestory coach for comparison.

#### **Bill of Materials**

Bachmann Spectrum Combine or Coach Roof  
 Evergreen Styrene—scale 1 x 2, scale 2 x 4, 0.060 x  
 0.188"

Bethlehem Car Works "Kit Bits" Gold Ventilators,  
 #34



## References

“Modifications to Walthers coaches” Bruce Elliott email, B&O Yahoo group, 9/18/06, 10:49 PM

*The Baltimore & Ohio Railroad Co., Diagrams of Passenger Equipment, Updated to 1958.* Reprint by TLC Publishing, Inc., Lynchburg, VA.

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## **PLANNED FOR THE NEXT ISSUE**

### **B&O Models from Prototype Modelers Meets Modeling Open Hoppers, W-1 and subclasses Silver Spring N-Trak Module**

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